BIOTROPICA 24(4): 583–588 1992

Subject Index to Volume 24

SUBJECT PAGE

abundance, litter animals 431
Acharya, L. 440
Acrocinus longimanus 86
Adkins, B. 440
Agaonidae 544
age, mangrove 173
agouti 408
agriculture 328
agroforestry 335
Aide, T. M. 532
Albizia 222
Allen, L. J. S. 77
allocation 134
allozymes 99
Alonso-Mejía, A. 415
Alseis blackiana 575
altitudinal limits, of plants 567
Alvarado, J. 560
Amazon watershed, evolutionary history 2
Amazonia
  nutrient cycling 240
  species diversity 282
  termites 420
amber 466
animal husbandry 328
Anoura 579
ant, plant associations 102
Arellano-Guillermo, A. 415
assassin bugs, fossil 466
Astrocaryum macrocalyx 447
atmosphere 233
Audet, D. 440
Australia
  herbivory 263
  monsoon rain forest 471
bamboo, pollination 577
Barro Colorado Island
  coati behavior 216
  herbivore defense 256
  leaf phenology 532
  mutualism 220
  seed dispersal 408
  tree growth 575
  tree reproduction 99
Basnet, K. 31
bats
  as pollinators 579
  in disturbed areas 440
  pollination 15
  tent roosting 447
  territoriality 15
Bauhinia 579
Bawa, K. S. 250
behavior
  roosting 447
  social, of coatis 216
Bergeron, Y. 64
biodiversity 345
biogeography
  fish 2
  of bruchids 195
biomass
  bryophyte community 106
  cloud forest 113
bioparks 345
biotic filter 106
bird, diet 200
Blake, J. G. 200
Bongers, F. 97
Borchert, R. 385
Bos indicus 538
Bosephalus tragocamelus 538
Boulton, W. J. 309
Brachyteles arachnoides 455
Brazil
  ant domiciles 102
  nutrient cycling 240
  pollination by bats 579
  seed predation 222
  spider monkeys 455
  termite diversity 420
  tree diversity 282
Breman, H. 328
Briones, O. 396
Bromeliaceae 402
Brower, L. P. 415
Bruchidae 195
bryophyte, community 106
bryophytes, nutrient cycling 121
Bullock, S. H. 134, 140
Burger, W. 567
Caesalpiniaceae 146
canopy, herbivory 97, 263
canopy structure, light levels 503
carbohydrate, nonstructural 140
carbohydrate balance 134
carbon, nutrient cycling 240
Castellanos V., A. E. 396
Cavanillesia platanifolia 99
Cavelier, J. 52
Ceiba pentandra 15
Chapman, C. A. 527
Chapman, L. J. 527
characids 550
charcoal 354
Chazdon, R. L. 43
Chelonia agassizii 560
chemical defense 309
Chernoff, B. 2
Chiroptera 440, 579
Chu, C. 134
Chusquea subtessellata 577
Clark, L. G. 577
climate 354
clonal growth
  of canopy tree 575
  of palm 43
clonal synchrony 577
cloud forest
  nutrient cycling 24
  nutrient dynamics 113
coatis
  behavior 216
  mutualism 220

coevolution ... 309, 544
Coley, P. D. ... 256
Colombia
  fossil fish ... 2
  leaf demography ... 52
colonization, limits ... 15
Colwell, R. K. ... 226
community
  bryophyte ... 106
  organization ... 309
community diversity, plankton ... 362
community ecology ... 226
community organization, resource based ... 273
competition
  among herbivores ... 273
  mannikin ... 77
  of bruchids ... 195
Compton, S. G. ... 544
congeneric species ... 567
conservation
  in zoos ... 345
  of sea turtles ... 560
  of spider monkeys ... 455
  of trees ... 283
Constantino, R. ... 420
Costa Rica
  avian frugivory ... 200
  bamboo pollination ... 577
  fire history ... 354
  herpetofauna ... 431
  nutrient dynamics ... 24, 113
  palm dynamics ... 43
  plant distribution ... 567
  seed predation ... 211
  wood structure ... 512
Cox, P. A. ... 15
Coxson, D. S. ... 121
crown volume ... 527
cryobiology ... 415
cyanobacteria ... 571
Dacryodes excelsa ... 31
Danaus plexippus ... 415
Davidar, P. ... 519
de Lampe, M. G. ... 64
de Sá, R. M. ... 455
deciduous forest ... 134, 140
decomposition, of epiphytes ... 24
dehydration ... 571
density-dependence
  habitat selection ... 77
  of outcrossing rate ... 99
desertification ... 328
dessication ... 121
Devol, A. H. ... 240
dew formation ... 415
diet, of migrant birds ... 200
diet choice, by leaf-cutter ants ... 211
dioecy ... 471
disjunct distributions ... 195
dispersal
  bird ... 214
  by gravity ... 146
  by wind ... 519
  of sea turtles ... 560
  secondary ... 146
dispersal distance, of seeds ... 519
disturbance
  anthropogenic ... 354
  atmospheric ... 233
  fire ... 166
  flooding ... 362
  hurricane ... 375
  seed germination ... 460
  tree spacing ... 31
diversity
  African forests ... 335
  litter animals ... 431
  mangrove ... 375
  of animals ... 293
  of termites ... 420
  plants on islands ... 488
  tree ... 283
Dominican Republic ... 466
Doryphora sassafras ... 263
drought ... 354
drought effect ... 385
dry forest
  bats ... 440
  coati behavior ... 216
  epiphytes ... 402
  fire exclusion ... 157
  island habitats ... 488
Duke, N. C. ... 173
Durán, R. ... 396
Dwyer, P. D. ... 293
East Pacific ... 560
ecological site classification ... 488
ecosystem, atmosphere influence ... 233
Ecuador ... 195
El Niño ... 354
electrophoresis ... 99
Elmqvist, T. ... 15
ENSO ... 354
Eperua grandiflora ... 146
epiphyte
  host trees ... 402
  nitrogen fixation ... 571
  nutrient cycling ... 24, 121
Espeletia barclayana ... 52
evolution, fish ... 2
extinction, fish ... 2
FAF interaction ... 538
fauna ... 293
feeding groups ... 455
Fenton, M. B. ... 440
Feria, M. ... 396
Ferris, D. K. ... 77
fertility ... 335
Ficus ... 214, 544
fig, fruit dimorphism ... 214
Figueroa, A. ... 560
fine litter ... 113
fire
  exclusion ... 166
  history ... 354
Fischer, E. A. ... 579
fish community ... 550
flood plain forest ... 106
flood plain wetland, seed dispersal ... 538
Florida Keys, site classification ... 488
flower phenology ... 532

flowering
bamboo 577
phenology 64, 187
flying fox 15
Flynn, L. J. 488
foliage-as-fruit hypothesis 538
food webs 273, 309
foraging behavior 579
forest fragment 222
forest structure 375, 455
Forget, P.-M. 146, 408
Forsberg, B. R. 240
fossil
fish 2
insects 466
Foster, M. S. 447
fragmentation 283
Frangi, J. L. 106
Freeland, W. J. 309
freezing 415
French Guiana
harlequin beetles 86
regeneration 146
French Guyana, herbivory 97
French West Indies 121, 571
frugivory
by migrant birds 200
by ungulates 538
fruit abundance, estimation 527
fruiting
phenology 187
semi-arid vegetation 64
gall 273
gaps 256, 503
Gardner, L. 527
gas 233
Gebo, D. 527
gene flow 471
genet integration 140
genetic differentiation 250
Geonoma congesta, reproduction 43
germination 460
Ghana 166
Glossophaga 579
Gompper, M. E. 216
gradient analysis 488
granivory 538
grooming, parasite removal 220
growth
mangrove 173
of palm 43
growth patterns
lianas 396
of trees 512
growth rates, paramo plants 52
Guadeloupe
canopy bryophytes 121
cyanobacteria 571
Guariguata, M. R. 575
guild, of bruchids 195
Gustavia superba 408
Guzmán, S. 396
gynodioecy, of figs 214
habitat disruption 440
habitat loss 345
habitat selection, mannikin 77
habitat use 455
Hamrick, J. L. 99
harlequin beetle, sexual selection 86
Hawaii 77
Hawthorne, W. D. 166
Heinen, J. T. 431
herbivore escape 532
herbivory
by leaf-cutter ants 211
canopy 97
food webs 309
in canopy 263
in food webs 273
on seedlings 408
plant defense 256
Heteropterys palmeri 396
Hickey, M. B. C. 440
Hogan, K. P. 503
Holocene 354
Horn, S. P. 354, 577
host plants, of bruchids 195
host specificity 544
humans 293
hummingbird 226
Hunt, K. 527
hurricane damage 375
Hurtado, A. 52
Hybanthus 532
hydroperiodicity 385
Hymenoptera 544
Idol, J. R. 503
India
seed dispersal 519
seed herbivory 538
indicator species 440
Inga 222
introduced species 77, 460
invertebrate, resource use 293
island
diversity 15
vegetation 488
Isoptera 420
isotopes, nutrient cycling 240
Jacaratia mexicana 140
Jamaica 362
Johnson, C. D. 195
juvenile growth, of trees 575
Kangas, P. 463
Kavanagh, T. 157
Kellman, M. 157
Kenya 187
Kikkawa, J. 293
Kinnaird, M. F. 187
Krinsley, J. S. 216
Kursar, T. A. 256
La Selva 431
Laignelet, A. 52
Lambert, F. R. 214
land use planning 283
landscape ecology 31
leaf area 263
leaf demography, caulescent rosette 52
leaf flush 256
leaf growth 263
leaf loss, to herbivory 263
leaf phenology 532

Leduc, A. 64
Lee, A. H. 471
Lesser Antilles 571
Liabum caducifolium 396
liana, growth 396
life form 471
light availability, effects on herbivory 211
light environment 503
limestone islands 488
litter herpetofauna, diversity 431
liverwort 121
logistic regression model 471
Loiselle, B. A. 200
Lonchura malacca 77
Lonchura puntulata 77
Lophopetalum wightianum 519
lowland moist forest 503
Lowman, M. D. 263
Lugo, A. E. 106
Lundberg, J. G. 2
Luquillo Experimental Forest 106
Machado, J. L. 52
Macconnell's bat 447
Magdalena River 2
male sterility 577
management 335
mangrove
  aging 173
  nitrogen fixation 571
  regeneration 375
mannikin, competition 77
mapping method 396
marine plankton 362
Martinelli, L. A. 240
Mason, D. H. 538
mate success, harlequin beetle 86
Matelson, T. J. 24, 113
mating system, flowering tree 99
mating systems, rain forest plants 250
Matson, P. A. 233
Matsui, E. 240
McClearn, D. 220
McIntyre, D. D. 121
McNeil, R. 64
Mejia, C. 52
Merriman, C. 440
Mexico
  bats 440
  epiphytes 402
  lianas 396
  monarch butterflies 415
  nutrient storage 140
  root proliferation 157
  sea turtles 560
  vine nutrients 134
Middleton, B. A. 538
migrant bird, feeding 200
mite 226
model, of phenology 385
modular growth 396
moist forest 335, 575
monarch butterflies 415
monsoon rain forest 471
montane forest, nutrient cycling 24, 113
montane rain forest 121
Monteverde Cloud Forest 113
Montoya, J. 52
Mooney, H. A. 134
moss 121
Moulton, M. P. 77
Murawski, D. A. 99
mutualism
  ant domatia 102
  breakdown 544
  decline 220
  in food webs 309
myrmecophyte 102
Nadkarni, N. M. 24, 113
Nasua narica 216, 220
Nicaragua 375
niche differentiation 402
Nichols-Orians, C. 211
nitrous oxide 233
nutrient cycling
  bryophyte community 106
  bryophytes 121
  carbon isotopes 240
  cloud forest 113
  from epiphytes 24
nutrients 233
O'Brien, J. J. 488
Obrist, M. K. 440
Ochroma pyramidale 512
Okali, D. U. U. 335
Olmsted, I. C. 402
Orchidaceae 402
Orgle, T. K. 166
Ortaz, M. 550
OTS 226
outcrossing rate, density dependence 99
overexploitation 328
overwintering 415
ozone 233
Pacific islands 13
palm, growth 43
Panama
  canopy structure 503
  coati behavior 216
  herbivore defense 256
  leaf phenology 532
  mangrove aging 173
  mating system 99
  mutualism 220
  seed fate 408
  sexual selection 86
  tree growth 575
páramo 52, 354, 577
parapatry 567
parasite-host 309
parasitism, and mutualism 220
parasitoid 273
Parinari excelsa 102
parrots 222
patchiness 263, 293
pathology, and speciation 567
periodicity 385
Peru 447
phenology
  nutrient storage 134
  of leafing 256
  plant reproduction 64, 187
  tree 385

phorophyte 402
Phyllostomidae 440, 579
Phyllostomus 579
phylogenetic constraints, on herbivores 273
physiological ecology 571
Pierson, E. D. 15
Pinzón M., Z. S. 173
Pionus maximiliana 222
Pionus menstruus 222
Piper 567
plankton, marine 362
plant demography 575
plant populations 471
Poinar, G. O., Jr. 466
pollen viability 577
pollination
  by bats 15, 579
  community patterns 250
  dystrophic 15
pollination specificity 544
post-nesting recaptures 560
Prance, G. T. 102
predator–prey 309
Price, P. W. 273
primate behavior 455
productivity 362
Proplebeia dominicana 466
Psychotria 567
Puerto Rico
  landscape effects 31
  nutrient cycling 106
  root growth 463
radial growth, of trees 512
radiocarbon dating 354
rain forest
  breeding systems 250
  fires 354
  food webs 309
  herbivory 97, 263
  herpetofauna 431
  landscape effects 31
  patchiness 293
  seed dispersal 519
  termite diversity 420
Rainey, W. E. 15
ramet mortality, of palm 43
recruitment
  mangrove forest 173
  plant population 146
regeneration
  forest 166
  mangrove forest 375
  of bamboo 577
  of canopy tree 575
  of large-seeded tree 146
reproduction
  of palm 43
  paramo plants 52
reproductive cost 140
reproductive strategy, of plants 471
resin collection 466
resource, patchiness 293
resource partitioning 579
resource quality 273
restoration ecology 431
Rhizophora mangle 173
Richey, J. E. 240
river 240
riverine forest 187
Robichaux, R. 134
Robinson, M. H. 345
Roff, J. C. 362
root
  growth 157
  proliferation 157
  regrowth 463
Ross, M. S. 488
Roth, L. C. 375
Rueda, R. 503
Russell-Smith, J. 471
Sahel 328
salinity 362, 571
Samoa 15
Sanford, R. L., Jr. 354
satiation, of predators 408
Savage, M. 460
savanna
  fire effects 166
  seed dispersal 538
sawfly 273
scatterhoarding 146
sea turtle, recaptures 560
seasonality
  allocation 140
  and herbivory 532
  in fish communities 550
  leaf demography 52
  nutrient dynamics 113
  of root growth 157
  plant reproduction 64
  resource abundance 187
sediments, Amazon River 240
seed dispersal
  by agouti 408
  by ungulates 538
  community pattern 471
  of tree 146
seed dormancy 471
seed herbivory 538
seed predation
  by bruchids 195
  by parrots 222
  by rodents 146, 408
seed set 577
seed shadow 519
seed traits 519
seedlings, mangrove 173
semi-arid tropics, plant phenology 64
sexual dimorphism
  in harlequin beetles 86
  of behavior 216
sexual selection 86
Sheridan, R. P. 571
Siemens, D. H. 195
simulation, phenology 385
Sinha, A. 519
Smith, A. P. 503
soil fauna 293
soil moisture 157
soils 335
South Africa, fig pollination 544
space utilization 396

speciation
rain forest plants 250
through pathogens 567
species boundaries 567
species diversity
and zoos 345
in forests 283
of epiphytes 402
Spondias purpurea 140
stability 309
stem growth 134
Sterck, F. 97
stingless bees, fossil 466
Strier, K. B. 455
succession
after hurricane 375
savanna 166
sugars, pulse release 121
survivorship, of butterflies 415
Sus scrofa 538
sustainable land use 328, 335
Swaine, M. D. 166
swamp forest 420
Syme, D. M. 440
synchrony, of leafing 532
tabonuco, spatial pattern 31
tagging, of sea turtles 560
Tapirus bairdii 220
Tavakilian, G. 86
temperature, and survival 415
Terborgh, J. 283
termites 420
territoriality, by bats 15
theory 226, 309
thorn woodland, plant phenology 64
ticks 220
Tillandsia spp. 402
topography, effect on trees 31
translocation 140
tree diameter 527
treefall gaps 503
Trivelin, P. C. O. 240
trophic relations, aquatic 550
trophic structure 273, 309
tropical streams 550
troposphere 233
TWINSPAN 488
Uganda, fruit abundance 527
understory, light environment 503
ungulates, as seed dispersers 538
vagility 471
Valencia, D. 52
Vampyressa macconnelli 447
van der Meer, P. 97
Varela, A. 52
varzea 240
vegetation analysis 488
Venezuela
fish diet 550
plant phenology 64
Victoria, R. L. 240
vine tangle 460
vines, nutrient storage 134
Vitousek, P. M. 233
Vogel, H. J. 121
Wangham, R. 527
Ware, A. B. 544
wasp 273
Webber, D. F. 362
Webber, M. K. 362
West Africa
desertification 328
sustainable use 335
West Malaysia 214
Western Ghats 519
Western Samoa 460
wet forest
root regrowth 463
wood development 512
Williamson, G. B. 503
wind dispersal 519
wood specific gravity 512
woolly spider monkey 455
Zeh, D. W. 86
Zeh, J. A. 86
Zimmerman, J. K. 402
zoo 345
zooplankton, diversity 362